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We currently offer real-time and historical data of US stocks listed in the S&P500, NASDAQ100, and the DJI. You can find the full list of available stocks below.

Exchange name		ID	Listed and traded	
	Binance	binance	1359	View symbols
	Binance Futures	binancefutures	392	View symbols
	Bitstamp	bitstamp	245	View symbols
	WhiteBIT	whitebit	570	View symbols
	ByBit	bybit	656	View symbols
	Gate.io	gateio	3252	View symbols
	Coinbase	coinbase	426	View symbols
	Binance US beta	binanceus	190	View symbols
	Kraken beta	kraken	896	View symbols

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Exchanges marked as "beta" are still under active development and are meant for testing, not live trading.

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[POST] REST – Bulk

Bulk queries provide a convenient way of fetching more than one indicator calculation in just one request. A maximum of 20 calculations is allowed for every plan, including the free plan.

Getting started

To get started you must send a POST with a JSON body containing your query, to the endpoint **/bulk**

Endpoint

```
[POST] https://api.taapi.io/bulk
```

Query

The query is a simple JSON object, and at the top level you will need to supply your secret token, and below that you define the `construct`. This is an object defining the basis for the query, specifically, which candle data is needed for the calculations.

Finally, the construct takes an array of `indicators`, each with it's own properties.

Complete query example

```
{
    "secret": "TAAPI_SECRET",
    "construct": {
        "exchange": "binance",
```

```
        "symbol": "BTC/USDT",
        "interval": "1h",
        "indicators": [
            {
                "indicator": "rsi"
            },
            {
                "indicator": "cmf",
                "period": 20
            },
            {
                "id": "my_custom_id",
                "indicator": "macd",
                "backtrack": 1
            }
        ]
    }
}
```

The `construct` takes these parameters:

Parameter	Type	Description
exchange	String	The exchange you want to calculate the indicator from: `binance`, `binancefutures` or one of our supported exchanges. Mandatory only for type=crypto.
symbol	String	Symbol names are always uppercase, with the coin separated by a forward slash and the market: COIN/MARKET. For example: `BTC/USDT` Bitcoin to Tether, or `LTC/BTC` Litecoin to Bitcoin...
interval	String	Interval or time frame: We support the following time frames: `1m`, `5m`, `15m`, `30m`, `1h`, `2h`, `4h`, `12h`, `1d`, `1w`. So if you're interested in values on hourly candles, use `interval=1h`, for daily values use `interval=1d`, etc.
type	String	[`crypto`, `stocks`] Tells the query which asset type to look for. Defaults to `crypto`.
indicators	Array	An array of indicator objects. See below 'Indicators' section.

Indicators

Each element in the above `indicators` array, must be an object containing at least one parameter: `indicator`. This is the name (or endpoint name) of the indicator. A complete list of indicators may be found here.

Full indicator parameter list:

Parameter	Type	Required	Description
indicator	String	Yes	Requested indicator, please see the indicators page for a list of indicators.
id	String	No	Custom IDs are useful so that you can keep track of which indicator call returns which result. By default, the response will show an ID comprised of `<exchange>_<symbol>_<timeframe>_<indicator>_<[parameters]>`
backtrack	Integer	No	The `backtrack` parameter removes candles from the data set and calculates the indicator value X amount of candles back. So, if you're fetching an indicator on the hourly and you want to know what the indicator value was 5 hours ago, set `backtrack=5`. The default is `0` and a maximum is `50`.
chart	String	No	The `chart` parameter accepts one of two values: `candles` or `heikinashi`. `candles` is the default, but if you set this to `heikinashi`, the indicator values will be calculated using Heikin Ashi candles.
results	Int/'max'	No	The number of indicator results to be returned. Ex. 5 will return the last 5 RSI results for instance. With bulk calls, you are only allowed a max of `20 results`. If you would like more results returned, please use the Direct Method.
addResultTimestamp	Boolean	No	[`true` , `false`] – defaults to `false`. By setting to `true`, the API will return a timestamp with every result (real-time and historical) to which candle the value corresponds. This is helpful when requesting historical data.
gaps	Boolean	No	[`true` , `false`] – defaults to `true`. By setting to false, the API will ensure that there are no candles missing. This often happens on lower timeframes in thin markets. Gaps will be filled by a new candle with 0 volume, and OHLC set the the close price of the latest candle with volume.
<other>	–	Indicator dependant	Please refer to the indicators page and see applicable parameters for the specific indicator.

Headers

Some REST clients may need to be told explicitly which headers to use. Add these headers to the requests if the responses doesn't match the expected output.

Key	Value	Description
Content-Type	application/json	The `Content-Type` representation header is used to indicate the original media type of the resource (prior to any content encoding applied for sending).
Accept-Encoding	application/json	The `Accept-Encoding` request HTTP header indicates the content encoding (usually a compression algorithm) that the client can understand. The server uses content negotiation to select one of the proposals and informs the client of that choice with the Content-Encoding response header.

Responses

Response for above query

```json
{
  "data": [
    {
      "id": "binance_BTC/USDT_1h_rsi_0",
      "result": {
        "value": 54.32482848167602
      },
      "errors": []
    },
    {
      "id": "binance_BTC/USDT_1h_cmf_20_0",
      "result": {
        "value": -0.08128034485998774
      },
      "errors": []
    },
    {
      "id": "my_custom_id",
      "result": {
        "valueMACD": 21.057252245545897,
        "valueMACDSignal": 13.564391223138724,
        "valueMACDHist": 7.4928610224071726
      },
      "errors": []
    }
```

```
        ]
    }
```

Examples

NodeJS

Call taapi using your favourite REST client, or use NPM to do the heavier lifting. Please refer to the NPM | NodeJS | TypeScript guide for detailed guidelines on this.

Bulk NodeJS

```javascript
// Require axios (npm i axios --save)
const axios = require("axios");

await axios.post("https://api.taapi.io/bulk", {
    "secret": "TAAPI_SECRET",
    "construct": {
        "exchange": "binance",
        "symbol": "BTC/USDT",
        "interval": "1h",
        "indicators": [
            {
                // Relative Strength Index
                "indicator": "rsi"
            },
            {
                // Chaikin Money Flow
                "indicator": "cmf",
                "period": 20 // Override the default 14
            },
            {
                // MACD Backtracked 1
                "id": "my_custom_id",
                "indicator": "macd",
                "backtrack": 1
            }
        ]
    }
}).then( response => {
    console.log(response);
}).catch( error => {
    console.error(error)
});
```

PHP

Use the built in tools in PHP and make CURL request, or use [Packagist.org | PHP Composer](#) to make life easier.

```php
Bulk Native PHP

<?php

// Define endpoint
$url = "https://api.taapi.io/bulk";

// Create curl resource
$ch = curl_init( $url );

// Setup query with JSON payload to be sent via POST.
$query = json_encode( (object) array(

    "secret" => "TAAPI_SECRET",
    "construct" => (object) array(
        "exchange" => "binance",
        "symbol" => "BTC/USDT",
        "interval" => "1h",
        "indicators" => array(
            (object) array(
                // Relative Strength Index
            "indicator" => "rsi"
            ),
            (object) array(
                // Chaikin Money Flow
            "indicator" => "cmf",
            "period" => 20,
            ),
            (object) array(
                // MACD Backtracked 1
                "id" => "my_custom_id",
                "indicator" => "macd",
                "backtrack" => 1
            ),
        )
    )

));

// Add query to CURL
curl_setopt( $ch, CURLOPT_POSTFIELDS, $query );
```

```php
// Define the content-type to JSON
curl_setopt( $ch, CURLOPT_HTTPHEADER, array('Content-Type:application/json'));

// Return response instead of printing.
curl_setopt( $ch, CURLOPT_RETURNTRANSFER, true );

// Send request.
$result = curl_exec($ch);

// Close curl resource to free up system resources
curl_close($ch);

// View result
print_r(json_decode($result)->data);
```

Python

```python
Bulk Python

import requests

url = "https://api.taapi.io/bulk"

payload = {
    "secret": "TAAPI_SECRET",
    "construct": {
        "exchange": "binance",
        "symbol": "BTC/USDT",
        "interval": "1h",
        "indicators": [
            {
                "indicator": "rsi"
            }, {
                "indicator": "ema",
                "period": 20
            },
            {
                "indicator": "macd"
            },
            {
                "indicator": "kdj"
            }
        ]
    }
}
```

```
headers = {"Content-Type": "application/json"}

response = requests.request("POST", url, json=payload, headers=headers)

print(response.text)
```

Multiple Constructs

Multiple constructs are a way of fetching indicator values across multiple and different candle sets. Examples might include different timeframes: `binance:BTC/USDT:15m` and `binance:BTC/USDT:1h` or different assets `binance:XRP/USDT:1d`, or even a different exchange: `bybit:BTC/USDT:5m`.

The same goes for stocks: `AAPL:15m` and `AAPL:1h`, or `MSFT:1h` and `TSLA:1h`.

Please visit our Multiple Constructs page for more information.

Rate limits

Bulk queries help you get the most out of your plan while making the queries more efficient. 1 bulk query = 1 API request, even if you include 20 different indicators inside. So you can get up to 20 calculations in a response by only spending 1 API request.

Multiple constructs are limited according to your plan. For instance, the Expert Plan, will allow you `10 different constructs`.

Using the 'results' optional parameter, is limited to 20 results per calculation. If you're looking for more results, please use the Direct Method.

That's it!

As always, feedback, comments are greatly appreciated!

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[POST] REST – Manual

Use this method if you want to use your own price data and use TAAPI to calculate the indicators from the provided dataset. To query the API you need to submit a POST request to: https://api.taapi.io with at least the mandatory parameters.

```
POST


https://api.taapi.io/rsi
```

You can calculate TA off of any candle set you have. Using this method requires sending a simple post including the candle data for which to calculate an indicator value.

Getting started

Submit a post with parameters in the request body to the above endpoint which includes your 'secret' and a 'candles' parameter containing the candles in JSON. The candles must be sent as objects with the below keys in an array:

- open: *A float, containing the open price of the candle*
- high: *A float, containing the high price of the candle*
- low: *A float, containing the low price of the candle*
- close: *A float, containing the close price of the candle*
- volume: *A float, containing the volume of the candle*

Candles must be submitted in ascending order, being the latest / newest candle last.

Example:

```
[
    {
        "timestamp": 1571320286000, // In milliseconds, optional
        "open": 238.32,
        "high": 343.12,
        "low": 125.94,
        "close": 243.48,
        "volume": 84342.84823
    },
    {
        "timestamp": 1571320286000, // In milliseconds, optional
        "open": 238.32,
        "high": 343.12,
        "low": 125.94,
        "close": 243.48,
        "volume": 84342.84823
    },
    ... n candles
]
```

The amount of candles depends on which indicator is used. If not sure, then send 300 candles. This amount will work for more or less all indicators. However, you can only send a maximum of 500 candles.

Mandatory Parameters

Below a list of mandatory post parameters, needed to query the API:

Parameter	Type	Description
secret	String	The secret which is emailed to you when you **Request an API key**.
candles	JSON (array with candle objects)	A JSON encoded array of objects containing candle information, ascending order (as described above)

Optional Parameters

There are no optional paramters for this integration method, other than the ones stated for each indicator on the Indicator endpoints page.

Examples

NodeJS

```javascript
// Require axios: npm i axios
const axios = require('axios');

const indicator = 'rsi';

axios.post(`https://api.taapi.io/${indicator}`, {
  secret: MY_SECRET,
  candles: [{...}]
})
.then(function (response) {
  console.log(response.data);
})
.catch(function (error) {
  console.log(error);
});
```

PHP

```php
<?php

$indicator = 'rsi';

$parameters = json_encode(array(
  "secret" => 'MY_SECRET',
  'candles' => [{...}] // Candles in json
));

// Prepare new cURL resource
$ch = curl_init("https://api.taapi.io/{$indicator}");
curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
curl_setopt($ch, CURLINFO_HEADER_OUT, true);
curl_setopt($ch, CURLOPT_POST, true);
curl_setopt($ch, CURLOPT_POSTFIELDS, $parameters);

// Set HTTP Header for POST request
curl_setopt($ch, CURLOPT_HTTPHEADER, array(
    'Content-Type: application/json',
    'Content-Length: ' . strlen($canldes))
);

// Submit the POST request
$result = curl_exec($ch);
```

```php
// Close cURL session handle
curl_close($ch);

// View result
print_r(json_decode($result));
```

Python

```python
# import the requests library
import requests

# Get candles from your own source
candles = [{...}]; # Candles in json

# Define indicator
indicator = "rsi"

# Define endpoint
endpoint = f"https://api.taapi.io/{indicator}"

# Parameters to be sent to API
parameters = {
    'secret': 'MY_SECRET',
    'candles': candles
}

# Send post request and save response as response object
response = requests.post(url = endpoint, json = parameters)

# Extract data in json format
result = response.json()

# Print result
print(result)
```

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Indicator endpoints

On this page you will find the complete list of the 203 indicators that TAAPI.IO offers. Click the individual indicators for more information, such as which parameters to use, example API calls etc.

Search indicators

All indicators

Endpoint	Name	Category
2crows	Two Crows	Pattern recognition
3blackcrows	Three Black Crows	Pattern recognition
3inside	Three Inside Up/Down	Pattern recognition
3linestrike	Three-Line Strike	Pattern recognition
3outside	Three Outside Up/Down	Pattern recognition
3starsinsouth	Three Stars In The South	Pattern recognition
3whitesoldiers	Three Advancing White Soldiers	Pattern recognition
abandonedbaby	Abandoned Baby	Pattern recognition
abs	Vector Absolute Value	Math Transform
accbands	Acceleration Bands	Overlap Studies
ad	Chaikin A/D Line	Volume
add	Vector Arithmetic Add	Math Operators
adosc	Chaikin A/D Oscillator	Volume
advanceblock	Advance Block	Pattern recognition
adx	Average Directional Movement Index	Momentum
adxr	Average Directional Movement Index Rating	Momentum
ao	Awesome Oscillator	Momentum
apo	Absolute Price Oscillator	Momentum
aroon	Aroon	Momentum
aroonosc	Aroon Oscillator	Momentum

Endpoint	Name	Category
atan	Vector Trigonometric ATan	Math Transform
atr	Average True Range	Volatility
avgprice	Average Price	Price
bbands Popular	Bollinger Bands	Overlap Studies, Trend, Volatility
belthold	Belt-hold	Pattern recognition
beta	Beta	Statistic functions
bop	Balance Of Power	Momentum
breakaway	Breakaway	Pattern recognition
candle Popular	Candle	Price
candles	Candles	Price
cci Popular	Commodity Channel Index	Momentum
ceil	Vector Ceil	Math Transform
chop	Choppiness Index (CHOP)	Oscillators
closingmarubozu	Closing Marubozu	Pattern recognition
cmf Popular	Chaikin Money Flow	Volume
cmo	Chande Momentum Oscillator	Momentum, Oscillators
concealbabyswall	Concealing Baby Swallow	Pattern recognition
coppockcurve	Coppock Curve	Oscillators, Overlap Studies
correl	Pearson's Correlation Coefficient	Statistic functions
cos	Vector Trigonometric Cos	Math Transform
counterattack	Counterattack	Pattern recognition
darkcloudcover	Dark Cloud Cover	Pattern recognition
dema	Double Exponential Moving Average	Overlap Studies
div	Vector Arithmetic Div	Math Operators
dm	Directional Movement	Oscillators, Trend
dmi Popular	Directional Movement Index	Oscillators, Trend
doji Popular	Doji	Pattern recognition
dojistar	Doji Star	Pattern recognition
donchianchannels	Donchian Channels	Bands, Breakouts, Overlap Studies, Trend, Volatility
dpo	Detrended Price Oscillator	Oscillators
dragonflydoji	Dragonfly Doji	Pattern recognition
dx	Directional Movement Index	Momentum, Oscillators
ema Popular Updated	Exponential Moving Average (EMA)	Overlap Studies
engulfing	Engulfing Pattern	Pattern recognition
eom	Ease of Movement	Oscillators
eveningdojistar	Evening Doji Star	Pattern recognition
eveningstar	Evening Star	Pattern recognition
fibonacciretracement Popular	Fibonacci Retracement	Overlap Studies
fisher	Fisher Transform	

Endpoint	Name	Category
floor	Vector Floor	Math Transform
fosc	Forecast Oscillator	Oscillators
gapsidesidewhite	Up/Down-gap side-by-side white lines	Pattern recognition
gravestonedoji	Gravestone Doji	Pattern recognition
hammer	Hammer	Pattern recognition
hangingman	Hanging Man	Pattern recognition
harami	Harami Pattern	Pattern recognition
haramicross	Harami Cross Pattern	Pattern recognition
highwave	High-Wave Candle	Pattern recognition
hikkake	Hikkake Pattern	Pattern recognition
hikkakemod	Modified Hikkake Pattern	Pattern recognition
hma Popular	Hull Moving Average	Overlap Studies
homingpigeon	Homing Pigeon	Pattern recognition
ht_dcperiod	Hilbert Transform – Dominant Cycle Period	
ht_dcphase	Hilbert Transform – Dominant Cycle Phase	
ht_phasor	Hilbert Transform – Phasor Components	
ht_sine	Hilbert Transform – SineWave	
ht_trendline	Hilbert Transform – Instantaneous Trendline	Overlap Studies
ht_trendmode	Hilbert Transform – Trend vs Cycle Mode	
ichimoku Popular	Ichimoku Cloud	Momentum, Overlap Studies
identical3crows	Identical Three Crows	Pattern recognition
inneck	In-Neck Pattern	Pattern recognition
invertedhammer	Inverted Hammer	Pattern recognition
kama	Kaufman Adaptive Moving Average	Overlap Studies
kdj	KDJ	Overlap Studies
keltnerchannels	Keltner Channels	Overlap Studies, Volatility
kicking	Kicking	Pattern recognition
kickingbylength	Kicking – bull/bear determined by the longer marubozu	Pattern recognition
kvo	Klinger Volume Oscillator	Oscillators
ladderbottom	Ladder Bottom	Pattern recognition
linearreg	Linear Regression	Statistic functions
linearreg_angle	Linear Regression Angle	Statistic functions
linearreg_intercept	Linear Regression Intercept	Statistic functions
linearreg_slope	Linear Regression Slope	Statistic functions
ln	Vector Log Natural	Math Transform
log10	Vector Log10	Math Transform
longleggeddoji	Long Legged Doji	Pattern recognition
longline	Long Line Candle	Pattern recognition

Endpoint	Name	Category
ma Popular	Moving Average	Overlap Studies
macd Popular	Moving Average Convergence Divergence (MACD)	Momentum
macdext	MACD with controllable MA type	Momentum
mama	MESA Adaptive Moving Average	Overlap Studies
marketfi	Market Facilitation Index	Momentum, Trend, Volume
marubozu	Marubozu	Pattern recognition
mass	Mass Index	Volatility
matchinglow	Matching Low	Pattern recognition
mathold	Mat Hold	Pattern recognition
max	Highest value over a specified period	Math Operators
maxindex	Index of highest value over a specified period	Math Operators
medprice	Median Price	Price
mfi Popular	Money Flow Index	Momentum, Oscillators
midpoint	MidPoint over period	Overlap Studies
midprice	Midpoint Price over period	Overlap Studies
min	Lowest value over a specified period	Math Operators
minindex	Index of lowest value over a specified period	Math Operators
minmax	Lowest and highest values over a specified period	Math Operators
minmaxindex	Indexes of lowest and highest values over a specified period	Math Operators
minus_di	Minus Directional Indicator	Momentum
minus_dm	Minus Directional Movement	Momentum
mom Popular	Momentum	Momentum
morningdojistar	Morning Doji Star	Pattern recognition
morningstar	Morning Star	Pattern recognition
msw	Mesa Sine Wave	
mul	Vector Multiplication	Math Transform
mult	Vector Arithmetic Mult	Math Operators
natr	Normalized Average True Range	Volatility
nvi	Negative Volume Index	Volume
obv	On Balance Volume	Volume
onneck	On-Neck Pattern	Pattern recognition
pd	Price direction	Momentum, Oscillators
piercing	Piercing Pattern	Pattern recognition
pivotpoints Popular	Pivot points	Overlap Studies, Support & Resistance, Trend
plus_di	Plus Directional Indicator	Momentum
plus_dm	Plus Directional Movement	Momentum
ppo	Percentage Price Oscillator	Momentum, Oscillators

Endpoint	Name	Category
price	Price	Price
priorswinghigh	Prior Swing High	Price
priorswinglow	Prior Swing Low	Price
psar Popular Updated	Parabolic SAR	Overlap Studies, Trend
pvi	Positive Volume Index	Volume
qstick	Qstick	Trend
rickshawman	Rickshaw Man	Pattern recognition
risefall3methods	Rising/Falling Three Methods	Pattern recognition
roc Popular	Rate of change	Momentum, Oscillators, Trend
rocp	Rate of change Percentage	Momentum
rocr	Rate of change ratio	Momentum
rocr100	Rate of change ratio 100 scale	Momentum
round	Vector Round	Math Transform
rsi Popular	Relative Strength Index (RSI)	Momentum, Oscillators
separatinglines	Separating Lines	Pattern recognition
shootingstar	Shooting Star	Pattern recognition
shortline	Short Line Candle	Pattern recognition
sin	Vector Trigonometric Sin	Math Transform
sma	Simple Moving Average	Overlap Studies
smma	Smoothed Moving Average (SMMA)	Overlap Studies, Trend
spinningtop	Spinning Top	Pattern recognition
sqrt	Vector Square Root	Math Operators
stalledpattern Popular	Stalled Pattern	Pattern recognition
stddev Popular	Standard Deviation	Statistic functions, Volatility
sticksandwich	Stick Sandwich	Pattern recognition
stoch Popular Updated	Stochastic	Momentum, Oscillators
stochf	Stochastic Fast	Momentum, Oscillators
stochrsi Popular Updated	StochRSI – Stochastic Relative Strength Index	Momentum, Oscillators
sub	Vector Arithmetic Substraction	Math Operators
sum	Summation	Math Operators
supertrend Popular Updated	Supertrend	Momentum, Trend
t3	Triple Exponential Moving Average (T3)	Overlap Studies
takuri	Takuri	Pattern recognition
tan	Vector Trigonometric Tan	Math Transform
tanh	Vector Trigonometric Tanh	Math Transform
tasukigap	Tasuki Gap	Pattern recognition
tdsequential Popular	Tom Demark's Sequential	Momentum
tema	Triple Exponential Moving Average	Overlap Studies
thrusting	Thrusting Pattern	Pattern recognition

Endpoint	Name	Category
todeg	Vector Degree Conversion	Math Transform
torad	Vector Radian Conversion	Math Transform
tr Popular	True range	Price
trima	Triangular Moving Average	Overlap Studies
tristar	Tristar Pattern	Pattern recognition
trix Popular	TRIX	Momentum, Oscillators
trunc	Vector Truncate	Math Transform
tsf	Time Series Forecast	Statistic functions
typprice Popular	Typical Price	Price
ultosc Popular	Ultimate Oscillator	Momentum, Oscillators

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vosc	Volume Oscillator	Oscillators, Volume
vwap Popular	Volume Weighted Average Price (VWAP)	Overlap Studies, Volume
vwma	Volume Weighted Moving Average	Overlap Studies, Volume
wad	Williams Accumulation/Distribution (A/D)	Momentum
wclprice	Weighted Close Price	Price
wilders	Wilders Smoothing	Overlap Studies
williamsalligator	Williams Alligator	Overlap Studies, Trend
willr	Williams' %R	Momentum
wma	Weighted Moving Average	Overlap Studies
xsidegap3methods	Upside/Downside Gap Three Methods	Pattern recognition
zlema	Zero-Lag Exponential Moving Average	Overlap Studies

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[GET] REST – Direct

You can query the API with a simple GET request. All that is needed is to send your request to: https://api.taapi.io with at least the mandatory parameters. Additionally, this is the endpoint you need for fetching historical data.

Pros

- Easy to get started
- Works with NodeJS, PHP, Python, Ruby, Curl or via browser
- Historical data

Getting started

To get started, simply make an HTTPS GET Request or call in your browser:

```
GET

https://api.taapi.io/rsi?secret=API_KEY&exchange=binance&symbol=BTC/USDT&interval=1h
```

A JSON Response is returned:

```
{
    "value": 69.8259211745199
}
```

Mandatory Parameters

Our Direct method requires these parameters:

Parameter	Type	Description
secret	String	The secret which is emailed to you when you **Request an API key**.
exchange	String	The exchange you want to calculate the indicator from: `binance` , `binancefutures` or one of our <u>supported exchanges</u>. Mandatory for type=crypto only.
symbol	String	Symbol names are always uppercase, with the coin separated by a forward slash and the market: COIN/MARKET. For example: `BTC/USDT` Bitcoin to Tether, or `LTC/BTC` Litecoin to Bitcoin…
interval	String	Interval or time frame: We support the following time frames: `1m` , `5m` , `15m` , `30m` , `1h` , `2h` , `4h` , `12h` , `1d` , `1w` . So if you're interested in values on hourly candles, use `interval=1h` , for daily values use `interval=1d` , etc.

Depending on the indicator you call, there may or may not be more mandatory parameters. Additionally, there may be several other optional paramters, also depending on the indicator. Please refer to the <u>Indicators page</u> for more information.

Optional Parameters

Below is a list of optional parameters that all the indicators will take:

Parameter	Type	Description
backtrack	Integer	The `backtrack` parameter removes candles from the data set and calculates the indicator value X amount of candles back. So, if you're fetching an indicator on the hourly and you want to know what the indicator value was 5 hours ago, set `backtrack=5` . The default is `0` and a maximum is `50` .
chart	String	The `chart` parameter accepts one of two values: `candles` or `heikinashi` . `candles` is the default, but if you set this to `heikinashi` , the indicator values will be calculated using Heikin Ashi candles.
type	String	[crypto, stocks] – defaults to 'crypto'. This tells which asset class you're querying.
results	Int/"max"	The number of indicator results to be returned. Ex. `20` will return the last `20` RSI results, for instance. Setting `max` as a string will return either every historical data point available or the `max` allowed by your plan.

Parameter	Type	Description
addResultTimestamp	Boolean	[`true` , `false`] — defaults to `false` . By setting to `true` the API will return a timestamp with every result (real-time and historical) to which candle the value corresponds. This is helpful when requesting historical data.
gaps	Boolean	[`true` , `false`] — defaults to `true` . By setting to false, the API will ensure that there are no candles missing. This often happens on lower timeframes in thin markets. Gaps will be filled by a new candle with 0 volume, and OHLC set the the close price of the latest candle with volume.

Headers

Some REST clients may need to be told explicitly which headers to use. Add these headers to the requests if the responses doesn't match the expected output.

Key	Value	Description
Content-Type	application/json	The `Content-Type` representation header is used to indicate the original media type of the resource (prior to any content encoding applied for sending).
Accept-Encoding	application/json	The `Accept-Encoding` request HTTP header indicates the content encoding (usually a compression algorithm) that the client can understand. The server uses content negotiation to select one of the proposals and informs the client of that choice with the Content-Encoding response header.

Tools & Wrappers

TAAPI.IO comes with a variety of 3rd party integrations and wrappers, some of which includes NPM, PHP and 'no-code' integrations such as Make. Please take a moment to go through this list Utilities / 3rd party integrations.

Examples

Below you'll find some examples, how to connect, authenticate and query the API:

NodeJS

Javascript is a great language for coding bots, and using the NodeJS package makes it even simpler. Please refer to the NPM | NodeJS | TypeScript guide for detailed guidelines on this. Or

simply call taapi directly using Axios.

NPM - CommonJS

```javascript
// Require taapi (using the NPM client: npm i taapi --save)
const Taapi = require("taapi");

// Setup client with authentication
const taapi = new Taapi.default("TAAPI_SECRET");

taapi.getIndicator("rsi", "BTC/USDT", "1h").then( rsi => {
    console.log(rsi);
});
```

NPM - TypeScript

```typescript
// Import
import Taapi from 'taapi';

// Init taapi
const taapi = new Taapi("TAAPI_SECRET");

taapi.getIndicator("rsi", "BTC/USDT", "1h").then( rsi => {
    console.log(rsi);
});
```

NPM - Stocks

```typescript
// Import
import Taapi from 'taapi';

// Init taapi
const taapi = new Taapi("TAAPI_SECRET");

taapi.getIndicator("rsi", "AAPL", "1h", {
    type: "stocks",
}).then( rsi => {
    console.log(rsi);
});
```

Axios

```javascript
// Require axios: npm i axios
var axios = require('axios');
```

```
axios.get('https://api.taapi.io/rsi', {
  params: {
    secret: "TAAPI_SECRET",
    exchange: "binance",
    symbol: "BTC/USDT",
    interval: "1h",
  }
})
.then(function (response) {
  console.log(response.data);
})
.catch(function (error) {
  console.log(error.response.data);
});
```

PHP

Use the built in tools in PHP and make CURL request, or use [Packagist.org | PHP Composer](#) to make life easier.

Packagist.org | PHP Composer

```php
<?php

// Require taapi single
require 'vendor/taapi/php-client/single.php';

// Init taapi
$taapi = new TaapiSingle("TAAPI_SECRET");

// Calculate indicator
$result = $taapi->execute("rsi", "binance", "BTC/USDT", "1h", array(
    "period" => 200,
    "backtrack" => 1
));

// Print result
echo "RSI: $result->value";
```

Native PHP

```php
<?php
```

```php
$endpoint = 'rsi';

$query = http_build_query(array(
    'secret' => 'TAAPI_SECRET',
    'exchange' => 'binance',
    'symbol' => 'BTC/USDT',
    'interval' => '1h'
));

// Define endpoint
$url = "https://api.taapi.io/{$endpoint}?{$query}";

// create curl resource
$ch = curl_init();

// set url
curl_setopt($ch, CURLOPT_URL, $url);

//return the transfer as a string
curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);

// $output contains the output string
$output = curl_exec($ch);

// close curl resource to free up system resources
curl_close($ch);

// View result
print_r(json_decode($output));
```

Python

```python
Python

# Import the requests library
import requests

# Define indicator
indicator = "rsi"

# Define endpoint
endpoint = f"https://api.taapi.io/{indicator}"

# Define a parameters dict for the parameters to be sent to the API
parameters = {
```

```python
        'secret': 'TAAPI_SECRET',
        'exchange': 'binance',
        'symbol': 'BTC/USDT',
        'interval': '1h'
        }

# Send get request and save the response as response object
response = requests.get(url = endpoint, params = parameters)

# Extract data in json format
result = response.json()

# Print result
print(result)
```

Ruby

Ruby

```ruby
require 'net/http'
uri = URI("https://api.taapi.io/rsi?secret=TAAPI_SECRET&exchange=binance&symbol=BTC/US
puts Net::HTTP.get(uri)
```

Curl

Curl

```
curl "https://api.taapi.io/rsi?secret=TAAPI_SECRET&exchange=binance&symbol=BTC/USDT&in
```

That's it!

As always, feedback, comments are greatly appreciated!

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Request your free API key today and get started
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Integration

Here you will find all the information you need to successfully integrate TAAPI.IO into your trading project.

TAAPI.IO is a service specialised at calculating Technical Analysis (TA) or often referred to as [indicators](#). We provide real-time price data and TA calculations on any crypto trading pair listed on Binance and other exchanges listed on our [Exchanges page](#), as well as the most popular [US Stocks and ETFs](#). Lastly, if you have your own candles, perhaps as a historical data set, you can send them to the API and do calculations on those.

Where ever the term Indicator is used in this documentation, please refer to the [Indicators documentation](#).

Different integration methods available:

[GET] REST – Direct

Calculate indicators using real-time price data directly from the exchange of your choice (US Stocks, ETFs, Binance, Binance Futures, Bitstamp, Gate.io, ByBit and other supported exchanges). This method is great for fetching historical data.

View tutorial

[POST] Bulk

Bulk queries provide a convenient way of fetching more than one indicator calculation in just one request. This is great for fetching all the TA you need for a full evaluation of an asset, in just one request. For instance, fetch the RSI, MACD EMA200 all at once.

View tutorial

[POST] REST – Manual

Calculate indicators from any price data set (candles) you POST to the API. This may be from any Crypto, Stock, Futures, Bonds, Forex Exchanges where you have data from. You can even stack indicators, do additional smoothening by calculating an EMA5 over a series of RSI results or calculate the RSI of the EMA50 if that might have a usecase.

View tutorial

3rd Party Utilitites

TAAPI.IO provides a variety of utilities and third party integrations that make it easy to use the API even without writing any code.

View utilities

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– – Binance Futures

Binance Futures

The worlds biggest bitcoin exchange and altcoin crypto exchange in the world by volume. Register here and save 10% on commissions thanks to being referred by TAAPI.IO.

Available intervals

1m 3m 5m 15m 30m 1h 2h 4h 6h 8h 12h 1d 1w

Get started with `binancefutures`

To query symbols from Binance Futures, simply use `binancefutures` as the required exchange parameter.

```
[GET] https://api.taapi.io/rsi?secret=MY_SECRET&exchange=binancefutures&symbol=BTC/USD
```

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```
[GET] https://api.taapi.io/exchange-symbols?secret=MY_SECRET&exchange=binancefutures
```

The list is updated daily at 12:00 UTC.

Up-to-date list of available symbols

BTC/USDT	SUSHI/USDT	BTCDOM/USDT	CFX/USDT	WAXP/USDT
ETH/USDT	EGLD/USDT	IOTX/USDT	STX/USDT	BSV/USDT
BCH/USDT	SOL/USDT	C98/USDT	BNX/USDT	RIF/USDT
XRP/USDT	ICX/USDT	MASK/USDT	ACH/USDT	POLYX/USDT
EOS/USDT	STORJ/USDT	ATA/USDT	SSV/USDT	GAS/USDT
LTC/USDT	UNI/USDT	DYDX/USDT	CKB/USDT	POWR/USDT
TRX/USDT	AVAX/USDT	1000XEC/USDT	PERP/USDT	TIA/USDT
ETC/USDT	ENJ/USDT	GALA/USDT	TRU/USDT	CAKE/USDT
LINK/USDT	FLM/USDT	CELO/USDT	LQTY/USDT	MEME/USDT
XLM/USDT	KSM/USDT	AR/USDT	USDC/USDT	TWT/USDT
ADA/USDT	NEAR/USDT	ARPA/USDT	ID/USDT	TOKEN/USDT
XMR/USDT	AAVE/USDT	CTSI/USDT	ARB/USDT	ORDI/USDT
DASH/USDT	FIL/USDT	LPT/USDT	JOE/USDT	STEEM/USDT
ZEC/USDT	RSR/USDT	ENS/USDT	AMB/USDT	BADGER/USDT
XTZ/USDT	LRC/USDT	PEOPLE/USDT	TLM/USDT	ILV/USDT
BNB/USDT	BEL/USDT	ROSE/USDT	LEVER/USDT	NTRN/USDT
ATOM/USDT	AXS/USDT	DUSK/USDT	RDNT/USDT	KAS/USDT
ONT/USDT	ALPHA/USDT	FLOW/USDT	HFT/USDT	BEAMX/USDT
IOTA/USDT	ZEN/USDT	IMX/USDT	XVS/USDT	1000BONK/USDT
BAT/USDT	SKL/USDT	API3/USDT	ETH/BTC	PYTH/USDT
VET/USDT	GRT/USDT	GMT/USDT	BLUR/USDT	SUPER/USDT
NEO/USDT	1INCH/USDT	APE/USDT	EDU/USDT	USTC/USDT
QTUM/USDT	CHZ/USDT	WOO/USDT	SUI/USDT	ONG/USDT
IOST/USDT	SAND/USDT	JASMY/USDT	1000PEPE/USDT	ETHW/USDT
THETA/USDT	ANKR/USDT	OP/USDT	1000FLOKI/USDT	JTO/USDT
ALGO/USDT	RVN/USDT	INJ/USDT	UMA/USDT	1000SATS/USDT
ZIL/USDT	SFP/USDT	STG/USDT	COMBO/USDT	AUCTION/USDT
KNC/USDT	COTI/USDT	SPELL/USDT	NMR/USDT	1000RATS/USDT
ZRX/USDT	CHR/USDT	1000LUNC/USDT	MAV/USDT	ACE/USDT
COMP/USDT	MANA/USDT	LUNA2/USDT	XVG/USDT	MOVR/USDT
DOGE/USDT	ALICE/USDT	LDO/USDT	WLD/USDT	NFP/USDT
SXP/USDT	HBAR/USDT	ICP/USDT	PENDLE/USDT	BTC/USDC
KAVA/USDT	ONE/USDT	APT/USDT	ARKM/USDT	ETH/USDC
BAND/USDT	LINA/USDT	QNT/USDT	AGLD/USDT	BNB/USDC
RLC/USDT	STMX/USDT	FET/USDT	YGG/USDT	SOL/USDC
MKR/USDT	DENT/USDT	FXS/USDT	DODOX/USDT	XRP/USDC
SNX/USDT	CELR/USDT	HOOK/USDT	BNT/USDT	AI/USDT
DOT/USDT	HOT/USDT	MAGIC/USDT	OXT/USDT	XAI/USDT
DEFI/USDT	MTL/USDT	T/USDT	SEI/USDT	DOGE/USDC
YFI/USDT	OGN/USDT	HIGH/USDT	CYBER/USDT	WIF/USDT
BAL/USDT	NKN/USDT	MINA/USDT	HIFI/USDT	MANTA/USDT
CRV/USDT	1000SHIB/USDT	ASTR/USDT	ARK/USDT	ONDO/USDT
TRB/USDT	BAKE/USDT	PHB/USDT	BICO/USDT	LSK/USDT
RUNE/USDT	GTC/USDT	GMX/USDT	BIGTIME/USDT	ALT/USDT

JUP/USDT	NEO/USDC	QUICK/USDT	HIPPO/USDT	DEXE/USDT
ZETA/USDT	FIL/USDC	NEIROETH/USDT	1000X/USDT	PHA/USDT
RONIN/USDT	TIA/USDC	RPL/USDT	DEGEN/USDT	DF/USDT
DYM/USDT	BOME/USDC	AERGO/USDT	BAN/USDT	GRIFFAIN/USDT
SUI/USDC	REZ/USDT	POL/USDT	AKT/USDT	AI16Z/USDT
OM/USDT	ENA/USDC	UXLINK/USDT	SLERF/USDT	ZEREBRO/USDT
LINK/USDC	ETHFI/USDC	1MBABYDOGE/USDT	SCRT/USDT	BIO/USDT
PIXEL/USDT	1000BONK/USDC	NEIRO/USDT	1000CHEEMS/USDC	COOKIE/USDT
STRK/USDT	BB/USDT	KDA/USDT	1000WHY/USDT	ALCH/USDT
ORDI/USDC	NOT/USDT	FIDA/USDT	THE/USDT	SWARMS/USDT
GLM/USDT	TURBO/USDT	FIO/USDT	MORPHO/USDT	SONIC/USDT
PORTAL/USDT	IO/USDT	CATI/USDT	CHILLGUY/USDT	D/USDT
TON/USDT	ZK/USDT	GHST/USDT	KAIA/USDT	PROM/USDT
AXL/USDT	MEW/USDT	LOKA/USDT	AERO/USDT	S/USDT
MYRO/USDT	LISTA/USDT	HMSTR/USDT	ACX/USDT	SOLV/USDT
1000PEPE/USDC	ZRO/USDT	REI/USDT	ORCA/USDT	ARC/USDT
METIS/USDT	CRV/USDC	COS/USDT	MOVE/USDT	AVAAI/USDT
AEVO/USDT	RENDER/USDT	EIGEN/USDT	RAYSOL/USDT	TRUMP/USDT
WLD/USDC	BANANA/USDT	DIA/USDT	KOMA/USDT	MELANIA/USDT
VANRY/USDT	RARE/USDT	1000CAT/USDT	VIRTUAL/USDT	VTHO/USDT
BOME/USDT	G/USDT	SCR/USDT	SPX/USDT	ANIME/USDT
ETHFI/USDT	SYN/USDT	GOAT/USDT	ME/USDT	VINE/USDT
AVAX/USDC	SYS/USDT	MOODENG/USDT	AVA/USDT	PIPPIN/USDT
1000SHIB/USDC	VOXEL/USDT	SAFE/USDT	DEGO/USDT	VVV/USDT
ENA/USDT	BRETT/USDT	SANTOS/USDT	VELODROME/USDT	BERA/USDT
W/USDT	ALPACA/USDT	TROY/USDT	MOCA/USDT	TST/USDT
WIF/USDC	POPCAT/USDT	PONKE/USDT	VANA/USDT	LAYER/USDT
BCH/USDC	SUN/USDT	COW/USDT	PENGU/USDT	HEI/USDT
TNSR/USDT	VIDT/USDT	CETUS/USDT	LUMIA/USDT	B3/USDT
SAGA/USDT	NULS/USDT	1000000MOG/USDT	USUAL/USDT	IP/USDT
LTC/USDC	DOGS/USDT	GRASS/USDT	AIXBT/USDT	GPS/USDT
NEAR/USDC	MBOX/USDT	DRIFT/USDT	FARTCOIN/USDT	SHELL/USDT
TAO/USDT	CHESS/USDT	SWELL/USDT	KMNO/USDT	
OMNI/USDT	FLUX/USDT	ACT/USDT	CGPT/USDT	
ARB/USDC	BSW/USDT	PNUT/USDT	HIVE/USDT	

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